DOCUMENT RESUME

ED 021 928 UD 006 257

By- Purkey, William Watson

PROJECT SELF DISCOVERY: ITS EFFECTS ON BRIGHT UNDERACHIEVERS AT NINE FLORIDA HIGH SCHOOLS.

Bureau No- BR-6-1334

Pub Date 8 Feb 68

Note- 11p.; Paper presented at annual meeting of the American Educational Research Association (Chicago, February 8, 1968).

EDRS Price MF- $0.25 HC- $0.52

Descriptors- ABLE STUDENTS, CONTROL GROUPS, EXPERIMENTAL GROUPS, *EXPERIMENTAL PROGRAMS, GROUP GUIDANCE, *HIGH SCHOOL STUDENTS, INDEPENDENT STUDY, INDIVIDUAL DIFFERENCES, INTERPERSONAL COMPETENCE, *PERSONALITY DEVELOPMENT, PROGRAM EFFECTIVENESS, SELF CONTROL, SELF ESTEEM, *SOCIAL DEVELOPMENT, STATISTICAL ANALYSIS, *UNDERACHIEVERS

Identifiers- California Psychological Inventory, Florida Project Self Discovery

Project Self Discovery, an experimental program, sought to promote the social and personal development of bright underachieving students in nine Florida high schools. Prepared and evaluated were 12 discrete but interrelated chapters (units) offering readings and written exercises. These independent study units were concerned with such topics as interpersonal relations, self-confidence, individual differences, feelings, and self-discipline. The effectiveness of this program was measured by pre- and post-testing using the California Psychological Inventory, and comparisons with a control group were made. Statistical analysis showed that there was "modest" evidence that the program had a positive and favorable effect on the experimental group. Counselors in the participating high schools were enthusiastic about Project Self Discovery and felt it was well-suited for group guidance activities. (NH)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

0257

PROJECT SELF DISCOVERY: ITS EFFECTS ON BRIGHT UNDERACHIEVERS AT NINE FLORIDA HIGH SCHOOLS

Paper Presented at 1968 Annual Meeting of AERA
Chicago, Illinois, February 8, 1968

William Watson Purkey
College of Education
University of Florida

A persistent problem in education is posed by those students whose measured or demonstrated aptitudes indicate superior intellectual ability but who are doing poorly in school. These students, referred to as "bright underachievers" function below their ability year after year and are thought to turn out as relatively non-productive members of adult society.

Research indicates that the tendency toward underachievement stems from difficulties in personal and social adjustment. The nature of these difficulties has been evolved from research and catalogued by a number of researchers including Terman & Oden (1947), Shaw (1961), and Mehorter (1964). These difficulties include such interrelated characteristics as inadequate social and family relationships, an inability to persevere, a lack of integration to goals, a negative self-concept, and a negative outlook on life. The present researcher distilled these problem areas into five major categories, namely:

I. Problems associated with lack of self-confidence

II. Problems associated with inadequate social relationships

III. Problems associated with lack of perseverance

IV. Problems associated with inadequate expression

V. Problems associated with an inadequate philosophy of life

UD 006 257
ED021928

The research reported herein was supported by the United States Office of Education, Department of Health, Education and Welfare (Project No. 6-1334, Final Report, August, 1967).

These problems served as foci for a multi-unit experimental study program built around the difficulties which the bright underachiever is recognized to experience.

Exactly stated, the problem of this study was the preparation and preliminary evaluation of an experimental study program: Project Self Discovery, designed to promote social and personal development among bright but underachieving high school students.

Description of Project Self Discovery

Project Self Discovery consists of twelve discrete but interrelated chapters. Each of the twelve chapters presents a relevant reading and writing exercise dealing with such topics as interpersonal relations, self confidence, individual differences, feelings, and self discipline. The reading is designed to point out the personal significance of the unit to the student and to enlighten the student about himself, his perceptions, and his relations with others. Each reading is followed by a "Self Discovery Exercise" (SDE), a writing assignment.

The readings and SDE's of Chapter 1 of Project Self Discovery serve to introduce the project to the student and to provide him with initially successful experiences with the work. Chapter 2 concerns itself with increasing student knowledge of the nature of perception, thereby encouraging the student toward greater flexibility and understanding that naive perceptions are misleading. Chapters 3 and 4 deal with perceptions toward self and others, showing the student the origin and development of self attitudes and their influence on interpersonal relations and individual accomplishment. Chapters 5, 6 and 7 relate to self confidence,

use of abilities, and techniques of success. Their purpose is to show the student that he is capable of responsible independence and accomplishment and to give him some guidelines to follow in accomplishing these ends. Chapters 8, 9 and 10 deal with the processes of communication, pointing out the roles of literature, art, and personal styles in communication and showing the student techniques for communicating meaningfully with others. The final two chapters, Chapters 11 and 12 focus on the student's emerging value system, his philosophy and his goals in life. The purpose of these last two chapters is to have the student look at his own belief system objectively and to have him consider favorable directions for the future. Together, the twelve chapters provide an organized sequence of perceptual experiences in which the student actively participates, organized around the problems which bright underachievers typically encounter.

Specifically, Project Self Discovery was designed to:

1. Improve general attitudes toward self through providing entertaining reading and writing exercises designed to promote the thought that the student is capable and adequate and is someone who really counts.

2. Increase the general level of personal and social adjustment through a series of reading and writing exercises dealing with interpersonal relations, feelings, perceptions, individual differences, self confidence, and self discipline.

3. Promote accuracy of self-insight by providing numerous experiences which permit the student to make an objective appraisal of his interests and abilities, his potential vocations, and his philosophy of life.

4. Advance the general education of the student by exploring literature in self-understanding. A special section on study techniques is included.

Procedure

While Project Self Discovery is intended to be used in a number of ways, including individual counseling, group guidance activities, and independent study, in the research here reported it was used in an independent-study, correspondence-style format.

General Design

Comparisons of the adjustive capacities of a group of bright but underachieving high school students were made before and after an experimental period in which they were exposed to Project Self Discovery. Comparisons with a control group were also made.

Instrument

The California Psychological Inventory (Gough, 1957) was selected over other personality inventories because it is suitable for use with young people and because its test items are subtle and not obviously related to the traits being evaluated.

Subjects

In order to obtain a representative sample of able but underachieving high school subjects for this study, it was necessary to obtain intelligence test scores and academic performance data on a larger population and then to select, according to previously chosen requirements, the subjects needed. The student records of all 10th and 11th graders in nine widely distributed Florida high schools* were screened for those students

---

*Gainesville High School, Gainesville; Madison High School, Madison; Cocoa Beach High School, Cocoa Beach; Miami Jackson High School, Miami; Winter Haven High School, Winter Haven; Newberry High School, Newberry; P.K. Yonge Laboratory School, Cainesville; Leesburg High School, Leesburg; Douglass High School, Live Oak.

who scored above the 75th percentile on national norms on School and College Ability Test, SCAT (full scale) in the 9th grade but whose 1965-66 average performance in the four academic subjects (math, English, science, history) was "C" (2.0) or below.

From the initial pool of approximately 160 underachievers, 120 were randomly selected and placed in experimental and control groups in equal numbers. These 120 S's were reduced in number to 104, based on availability of S for testing, obtaining of parental permission slips, and willingness of S's to participate. Further withdrawals from school, moving to other states and non-availability of some students for post-testing due to prolonged absence or illness, further reduced the final group sizes at the end of the project as follows: experimental group N of 44; control group N of 40. No statistically significant differences ($p \leq 0.05$) were found between final experimental and control groups in age, grade point average, or academic aptitude as measured by SCAT. The experimental group contained 29 tenth-grade and 15 eleventh-grade S's, while the control group contained 28 tenth-grade and 17 eleventh-grade S's. In an urban-rural breakdown, the experimental group included 30 S's from urban schools and 14 from rural schools, compared with the control group which had 26 S's from urban schools and 14 from rural schools.

Experimental Treatment

In October, 1966, all subjects in the experimental groups were introduced to Project Self Discovery. They were instructed to read each chapter and complete the "Self Discovery Exercises" (SDE's). They were asked to mail each SDE, in turn, to the "Project Counselor" (in this case the researcher) in the stamped and addressed envelopes provided for that purpose. The students were told that the Project Counselor would serve

as a sympathetic reader and would return the SDE's to the student with comments. It was further explained to each student that there were no time limits in Project Self Discovery, no grades, no evaluations, no pressures, and that the student should complete an SDE when he felt like it. (Although this procedure resulted in many students not completing the project during the eight-month experimental period, from October, 1967, through May, 1967, students in the experimental group completed and submitted 293 SDE's, averaging 6.7 SDE's per student.)

Method of Statistical Analysis

All computations for this study were carried out using the University of Florida IBM 0/S 360/50. For purposes of analysis the CPI raw score values were transformed to standard scores using published national norms. Following the principle of Lord (1960), a line of best fit was computed for the pre-treatment data. Then the deviation of post-test values from the pre-test values was determined for all S's. This resulted in deviation distributions for each of the 18 scales of the CPI for both treated and non-treated groups. In computing and comparing sample means and standard deviations for these two groups, sample mean deviations were computed as well as sample standard deviations of the computed deviation data. Resulting values were tested for significance of difference from zero. When it was appropriate to compare the treated and non-treated groups, homoscedasticity of sample variances was tested. In the rare instance where this property was not the case, the t-statistic was computed using the pseudo-t-statistic as presented by Wyatt and Bridges (1967) as well as the computed necessary degrees of freedom.

Results

When pre- and post-test CPI scores were compared, statistically significant (.05 level or better) improvements in adjustment as measured by the CPI were indicated on two of eighteen characteristics for the experimental group, and on two different characteristics for the control group. All differences were in a positive and favorable direction. The CPI scores indicated improvements on the "Dominance" and "Psychological Mindedness" scales by the experimental group, and improvements on the "Sociability" and "Achievement through Independence" scales in the control group. The only indicated improvement in adjustment shown by one group which was significantly greater than that shown by the other group was on the "Psychological Mindedness" scale. The experimental group showed an improvement on this scale which was significantly greater than that displayed by the control group. Table 1 gives T-score means and standard deviations for the CPI pre- and post-tests along with t-values of the differences.

TABLE 1

CHANGES IN MEAN T-SCORE FOR CPI SUB-SCALES
FROM PRE-TEST TO POST-TEST

	CPI	Experimental Group					Control Group					
		(1) Pre-test		(2) Post-test		(3)	(4) Pre-test		(5) Post-test		(6)	(7)
	Sub-scale	Mean	SD	Mean	SD	t	Mean	SD	Mean	SD	t	t
I	Do	51.9	11.2	53.8	11.1	2.03*	52.2	11.6	53.1	13.1	0.71	0.69
	Cs	51.7	9.1	51.3	9.6	-0.29	53.2	9.7	54.7	10.6	1.13	-1.06
	Sy	52.3	10.0	53.6	11.2	1.11	5328	9.4	56.2	9.3	2.74***	-0.73
	Sp	51.2	9.3	52.2	11.5	0.80	53.4	12.0	55.4	11.2	1.45	-0.55
	Sa	55.4	9.7	56.4	9.5	0.73	55.7	9.8	56.9	11.8	0.97	-0.18
	Wo	46.2	10.5	45.9	11.8	-0.22	48.3	10.2	47.8	13.1	-0.47	0.12
II	Re	51.4	9.0	52.4	8.8	1.18	49.3	11.2	50.1	11.8	0.58	0.18
	Se	46.8	11.5	44.5	11.9	-1.51	45.8	12.9	44.2	13.3	-1.21	-0.39
	Sc	44.9	9.0	44.8	10.6	-0.02	46.1	8.8	46.5	9.9	0.44	-0.31
	To	40.7	9.6	51.8	9.9	1.87	51.7	9.4	52.9	11.3	1.22	0.53
	Cl	44.0	8.9	45.7	9.9	1.79	47.1	8.5	47.5	9.3	0.43	0.95
	Cm	53.1	6.2	50.5	12.9	-1.51	51.0	11.0	49.9	13.0	-0.30	-0.95
III	Ac	48.0	9.9	47.5	11.4	-0.46	48.4	9.8	49.9	11.4	1.57	-1.36
	Ai	52.2	9.4	53.5	9.9	1.18	54.2	10.7	57.1	10.6	2.56**	-0.97
	Ie	52.1	10.8	52.5	9.2	0.33	52.2	9.7	53.8	10.8	1.58	-0.63
IV	Py	49.5	8.4	53.2	9.3	2.75***	52.6	10.7	52.7	9.8	0.09	2.10*
	Fx	53.9	11.8	52.3	11.4	-0.47	54.3	10.6	55.5	11.0	1.05	-1.05
	Fe	59.2	13.9	60.4	15.0	0.84	56.9	14.6	54.8	15.1	-1.65	1.71

* P .05
** P .02
*** P .01

Table 2 compares the 1965-66 and 1966-67 GPA's for both experimental and control groups. Both groups exhibited improved grade point averages significant at the .01 level. The GPA improvement of neither group was significantly greater than that of the other group.

TABLE 2

COMPARISONS OF GRADE-POINT-AVERAGES OF EXPERIMENTAL AND CONTROL GROUPS

	1965-66 GPA		1966-67 GPA		t
	Mean	SD	Mean	SD	
Experimental Group	1.65	0.51	2.00	0.83	3.05**
Control Group	1.51	0.55	1.34	0.64	3.25**

** P .01

Discussion

The results of this study are considered in order of their appearance. First, on the basis of pre- and post-test performance on the CPI, there is some modest evidence to suggest that Project Self Discovery did have a positive and favorable effect on the treated group. On the "Psychological-mindedness" scale, whose purpose is "to measure the degree to which the individual is interested in, and responsive to, the inner needs, motives, feelings, and experiences of others" and whose trait equivalent is "being sensitive to others and having a knack for understanding how others feel and react inwardly," the experimental group significantly out-performed the control group. However, this result was at a low .05 level of significance.

Second, regarding the differential effects on control and experimental groups' performance in CPI, which may have been brought about by Project Self Discovery, further research seems justified. Possibly multivariate analytical procedures would reveal that Project Self Discovery would be most effective for specific categories of students.

Third, it is worth noting that the underachievers in the experimental group completed and submitted a total of 293 SDE's on their own initiative without prompting or apparent extrinsic reward. This finding seems to question the traditional notion that underachievers are "unmotivated."

In conclusion, while Project Self Discovery did not have a highly positive hoped-for effect when used in an independent study, correspondence style format, enough research evidence was obtained to justify a continuation of research on the project. The counselors of the nine Florida high schools involved in the study were unanimous in their enthusiasm for Project Self Discovery and believed that it would be particularly well-suited for group guidance activities. Therefore, research is already under way using Project Self Discovery in group counseling sessions.

References

Gough, H.G. California Psychological Inventory. Palo Alto, California: Consulting Psychologists Press, Inc., 1956.

Gough, H.G. "Academic Achievement in High School as Predicted from the California Psychological Inventory", Journal of Educational Psychology, 1964, 55, 174-180.

Gough, H.G. and M. B. Fink. "Scholastic Achievement among Students of Average Ability as Predicted by the California Psychological Inventory", Psychology in the Schools, 1964, 1, 375-380.

Lord, Fred M. "Large-sample covariance analysis when the control variable is fallible", Journal of American Statistical Association, Vol. 55, June, 1960, 307-321.

Mehorter, James "Self and Society: Independent Studies for Exceptional Students", (unpublished doctoral dissertation, School of Education, University of Virginia, 1964).

Pierce, J.V. "Non-intellectual Factors Related to Achievement among Able High School Students". Report made at APA Convention, September, 1960.

Purkey, William W. The Self and Academic Achievement, Florida Educational Research and Development Council Research Bulletin, Vol. 3, No. 1, Spring, 1967.

Shaw, M. C. "The Inter-relationship of Selected Personality Factors in High Ability Underachieving School Children", Final Report, Project 58-M-1. Sacramento, California: California State Department of Public Health, 1961.

Terman, L.M. and Melita Oden. Genetic Studies of Genius - IV. The Gifted Child Grows Up. Stanford, Calif. Stanford University Press, 1947.

Wyatt, W.W. and C.M. Bridges. Statistics for the Behavioral Sciences (Boston: D.C. Heath & Co., 1967).